

**REMARKS/ARGUMENTS**

Claims 16 and 17 have been rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claim 17 has been canceled. Claim 16 is further rejected because it is drawn to non-functional descriptive material. Claim 16 has been amended to include “a computer-readable medium comprising computer instructions for driver-independent, printer-independent collated, face-up printer output,” and there is now a functional relationship imparted by this data to a computing device. Accordingly, this rejection of claim 16 should be withdrawn.

Claims 1-16 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claim 1 has been rejected based on insufficient antecedent basis for the limitation of line 5 in the claim. Claim 1 has been amended to recite the elements of:

“manipulating said page-independent index file to effect collated, face-up printing, thereby producing a manipulated page-independent index file; and converting said manipulated page-independent index file into printer-ready data using a print processor customized to use said manipulated page-independent index file.”

It is now clear that the index file of the last element of the claim is the manipulated page-independent index file of the previous element. Accordingly, this rejection of claim 1 should be

withdrawn. Claims 2-7 are dependent on independent claim 1, accordingly this rejection of claims 2-7 should be withdrawn in view of the amendments made to claim 1.

Independent claim 8 has been rejected due to insufficient antecedent basis for the limitation of “accessing said PISF index file to execute a print job” in line 7. Claim 8 has been amended to recite the elements of:

“allowing manipulation of said PISF index file to effect collated, face-up printing, thereby producing a manipulated PISF index file; and  
converting said manipulated PISF index file into printer-ready data using a print processor customized to use said manipulated PISF index file.”

It is now clear that the index file of the last element of the claim is the manipulated page-independent index file of the previous element. Accordingly, this rejection of claim 8 should be withdrawn.

Independent claim 9 has been amended to recite the elements of:

“manipulating said page-independent spool index file to effect face-up, collated output, thereby producing a manipulated page-independent spool index file; and  
converting said manipulated page-independent spool index file into printer-ready data using a print processor customized to use said manipulated page-independent spool index file.”

It is now clear that the index file of the last element of the claim is the manipulated page-independent spool index file of the previous element. Accordingly, this rejection of claim 9 should be withdrawn.

Claims 10-12 are dependent on independent claim 9, accordingly this rejection of claims 10-12 should be withdrawn in view of the amendments made to claim 9.

Claims 13-16 have been similarly amended to clarify which index file is presented in each claim element. Therefore, this rejection of claims 13-16 should be withdrawn.

Claims 1-16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Barry et al. (U.S. Patent No. 6,825,943) in view of Adobe PostScript.

Barry et al. disclose a method for splitting a print job into several portions for parallel RIP processing. Barry et al. disclose the use of a “control file” that contains parameters for managing the portions for parallel RIP processes. The control file is updated to keep track of the various portions of the print job while they are being apportioned. However, this control file is not analogous to the page-independent index file of these claims. The control file of Barry et al performs the function of splitting a print file for multiple concurrent RIP operations. Barry et al do not teach the use of a control file that changes the output print format in any way and does not teach any form of page-up printing. Independent claims 1, 8, 9, 13, 15, and 16, and all claims dependent thereon, as amended, comprise the element of a “page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of said print job.” This element is not taught in the combination of Barry et al and Adobe Postscript.

Using the index file, a *custom print processor* (emphasis added) can manipulate the file to achieve different sheet assembly and formatting options (application specification, p. 23, lines 2-4), such as changing a print job to face-up format and collating a print job for a face-up format. In specific embodiments, the index file may comprise a spool header, print job commands, document data, a print job footer, and one or more sequences of page persistent commands, page commands and page data. (application specification, p. 25, lines 2-5). Nowhere in Barry et al. is there a description of a page-independent index file that can be used to manipulate individual pages. Barry et al., or any combination of Barry et al. and Adobe PostScript do not disclose a page-independent index file that can be used to change the face-up or face-down characteristics of a print job. The control file of Barry et al. effects no face-up or face-down changes or any other change that effects the output of the print job. Additionally, in the invention of Barry et al., multiple print jobs corresponding to an original print job are sent to multiple processors. Each of the multiple print jobs comprises the entire print job with substitute RIP instructions (column 8, lines 12-20). This requires no modification or customization of a print processor to specially handle these jobs.

The examiner cites Barry et al. (updated spooled print file with updated control file, col. 6, lines 10-15; note: the control file is being viewed as part of spooled print job file) as creating the page-independent index file from the spool data file. However, these references do not disclose anything related to the page-independent index file. Barry et al. at col. 3 lines 15-20 disclose that the control file is "for storing job control information" and that it "may be a storage location or it may be merely a temporary data file that travels with the print job." Column 3 has

no reference to a page-independent index file that can be used to effectuate face-up or face-down output.

The examiner further cites Adobe Postscript only as disclosing collated face-up printing. Adobe Postscript does not disclose anything related to a page-independent index file, nor does it teach any motivation to combine a Postscript command with the concurrent RIP processes of Barry et al.

Claims 1-16, as amended, all comprise the element of a page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job, which is not found in any combination of the prior art. Additionally, claims 1-16, as amended, comprise the element of a customized print processor that uses the page-independent index file to create printer-ready data, which is not found in any combination of the prior art.

Independent claim 1 has been amended to comprise the elements of:

“creating a page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of said print job from said spool data file;  
manipulating said page-independent index file to effect collated, face-up printing, thereby producing a manipulated page-independent index file; and  
converting said manipulated page-independent index file into printer-ready data using a print processor customized to use said manipulated page-independent index file.”

Neither the page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of said print job, nor the customized print processor of these elements are taught in the combination of Barry et al. and Adobe Postscript. Claims 2-7 depend from claim 1 and comprise the limitations therein. Claims 1-7 are therefore allowable in their present form.

Independent claim 8 has been amended to comprise the elements of:

“creating a Page-Independent Spool File (PISF) index file comprising header data, footer data, and data corresponding to the front and the back of each page of said print job from said spool data file;  
allowing manipulation of said PISF index file to effect collated, face-up printing, thereby producing a manipulated PISF index file; and  
converting said manipulated PISF index file into printer-ready data using a print processor customized to use said manipulated PISF index file.”

Neither the PISF index file comprising header data, footer data, and data corresponding to the front and the back of each page of said print job, nor the customized print processor of these elements are taught in the combination of Barry et al. and Adobe Postscript. Claim 8 is therefore allowable in its amended form.

Independent claim 9 has been amended to comprise the elements of:

“creating a page-independent spool index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job;  
manipulating said page-independent spool index file to effect face-up, collated output, thereby producing a manipulated page-independent spool index file; and

converting said manipulated page-independent spool index file into printer-ready data using a print processor customized to use said manipulated page-independent spool index file.”

Neither the page-independent spool index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job, nor the customized print processor of these elements are taught in the combination of Barry et al. and Adobe Postscript. Claims 10-12 depend from claim 9 and comprise the limitations therein. Claims 9-12 are therefore allowable in their present form.

Independent claim 13 has been amended to comprise the elements of:

“creating a page-independent spool index file comprising header data, footer data, and data corresponding to the front and the back of each page of said print job;  
modifying said page-independent spool index file to reconfigure said print job to output in a face-up, collated orientation; and  
accessing said modified page-independent spool index file using a print processor customized to use said modified page-independent spool index file, to obtain document formatting information for printing.”

Neither the page-independent spool index file comprising header data, footer data, and data corresponding to the front and the back of each page of said print job, nor the customized print processor of these elements are taught in the combination of Barry et al. and Adobe Postscript. Claim 14 is dependent on claim 13 and comprises the limitations therein. Claims 13 and 14 are therefore allowable in their present form.

Independent claim 15 is directed to the customized print processor, and claim 15 has been amended to comprise the element of “an indexer for creating a page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job;” The page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job of this element is not taught in the combination of Barry et al. and Adobe Postscript. Claim 15 is therefore allowable in its amended form.

Independent claim 16 has been amended to comprise the elements of:

“creating a page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job; manipulating said page-independent index file to effect a collated, face-up output orientation, thereby producing a manipulated page-independent index file; and converting said manipulated page-independent index file into printer-ready data using a print processor customized to use said manipulated page-independent index file.”

Neither the page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job, nor the customized print processor of these elements are taught in the combination of Barry et al. and Adobe Postscript. Claim 16 is therefore allowable in its amended form.

In light of the arguments above, all claims are considered to be novel, non-obvious, and patentable in view of the cited art. The applicant respectfully requests that the examiner reconsider the rejections of these claims. The examiner is invited to contact applicant's attorney directly for any reason.



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Respectfully submitted,

/Scott C. Krieger/

Scott C. Krieger

Reg. No. 42,768

Tel No.: (360) 828-0589